

Application No.: 10/659,149
Reply to Office Action of April 21, 2005

Remarks/Arguments

This amendment is in reply to the Office action dated April 21, 2005. No new matter is added by the amendments. Each item addressed in the Office action is addressed below in the order in which they appear in the Office action.

Restriction Requirement

Applicant acknowledges with thanks the withdrawal of the species requirement.

Declarations

The Examiner requests that the declarations filed in the parent applications be resubmitted herein. It is noted that this is not a formal requirement. Reconsideration is requested. It is not believed that a declaration filed in the parent application is particularly relevant to the issues in this case. As such, it is not believed that resubmitting the declarations is necessary.

Objection to the Disclosure

The Examiner objects to the disclosure as containing an erroneous reference to certain figures. This error has been corrected by the amendments.

Double Patenting Rejection

The Examiner rejects Claims 1-13 under the judicially created doctrine of double patenting over US Patent 6,572,792, the parent application 10/123,028, copending application 10/659,090 and 10/690,391. The Examiner reasons that since the same process can be used to produce the metals produced by the processes must be patentably indistinct. Applicants traverse. While it is true that the products of the various claim sets overlap in their scope and can be made by the same process, these facts alone does not support an obviousness-type double patenting rejection. Indeed, the rejection is proper only if the subject matter of the claims of one make obvious the present claims. Looking to the restriction requirements made by the Examiner over the years, it appears that the Examiner appears to agree that other processes can be used to make products having the properties of the claims (i.e., the products are not uniquely made by the process described in the patent application) and not all products will have all properties described in each claim presented in each related patent application.

Application No.: 10/659,149
Reply to Office Action of April 21, 2005

With respect to the Examiner's statement regarding the public policy relating to avoiding the unjustified time-wise extension of the "right to exclude" granted by a patent, but for the patent term adjustment due to the patentee due to PTO delays, this application will expire on the same day as each of the above mentioned patent applications. The statutory purpose behind patent term extensions and adjustments is to allow the patentee to recoup delays in the patent office. This application has an effective filing date in 1999. Yet, the first action was received nineteen months after its filing date. These claims were presented in the earlier application (at the Examiner's suggestion) and were then canceled, again at the Examiner's request. It is contrary to the public policy behind the amendments to 35 USC 154 to demand a terminal disclaimer in this case. It is respectfully requested that the rejection be withdrawn.

Rejection under 35 U.S.C. 101

The Examiner has rejected all claims under 35 U.S.C. 101, stating that the invention is inoperative and therefore lacks utility. Quoting several statements from the specification relating to the inventor's theories behind the inventions claimed herein, the Examiner states that "It is clear from known principles of physics and chemistry that the instant compositions cannot exist according to conventional scientific theory." The Examiner does not recite those theories which presumably support the argument that the invention cannot exist. In the absence of a more detailed argument, it is believed that the Examiner's duty in supporting the rejection has not been satisfied in this case.

It is not seen that the Inventor's statement that the products of the claim result from a change in the electronic structure from the starting material is not per se unbelievable. It is well accepted within the scientific community that elements can exist in more than one electronic state and that elements having different electronic states possess different properties. For example, Zee, in discussing the work of Wen, states that "the study of topological order, or more generally quantum order, may open up a vast new vista on the possible states of matter." (Attached hereto are copies of the excerpt from Zee ("Quantum Theory in a Nutshell," page 306) and excerpts from Wen (Quantum Order: a Quantum Entanglement of Many Particles, (2001) and "Quantum Field Theory of Many-body Systems," Chapter 8)). Thus, the passage quoted from page 2 of the specification is not unbelievable and is not contrary to conventional scientific theory.

Application No.: 10/659,149
Reply to Office Action of April 21, 2005

With respect to the discussion of the terms, zurn and isozurn, and their definitions, the relevance of the discussion to the present claims is not apparent. The present claims do not define the invention with these terms. Thus, even if the Examiner does not accept the terminology used by the inventor, its definitions or the theory posed in the specification, the claims do not require that the Examiner adopt the terminology or theory.

The present claims are defined by reference to a well accepted technique for analyzing a material (via a Uniquant analysis). The specification provides a large number of examples where the technique has been used and, indeed, supports the claims. For example, in Example 1, at page 30, copper having a 99.98% purity was reacted in accordance with the invention. The crucible was made primarily of alumina; high purity graphite (<5ppm impurities) was the only solid material added; argon and nitrogen were the only gases added; the material was cooled in water. The material was assessed by a calibrated Uniquant analysis, the reports for which are set forth in Table 5-13. Table 5 shows that the percentage of copper in the sample decreased to 98.07% and detected elements such iridium at 0.025%. Table 6 shows a sample from the same ingot and reports copper at 98.69%, scandium at 0.004% and lanthanides at 0.014%. Table 7 shows a sample from the same ingot and reports copper at 99.71%, iridium at 0.024% and lanthanides at 0.024%. Similar results can be seen in the remaining tables. There is no reason to believe that the original ingot contained iridium or lanthanides, for example, and such materials were not introduced into the process. Thus, the claim is supported with substantial data. Respectfully, no more is required under the law.

Furthermore, other groups have recently reported similar results. For example, in WO 2004/017685, the author reports a process for applying energy to a material and observed elements not previously observed. This author proposes a theory quite different from that proposed by the present inventor (Adamenko suggests that the material has undergone a transmutation while the present inventor teaches that the material has adopted a new electronic state). Nonetheless, the results speak for themselves and support the present claims.

Withdrawal of the rejection is requested.

Rejection under 35 U.S.C. 112, first paragraph

The Examiner rejects all claims under 35 U.S.C. 112, first paragraph, as lacking enablement. The Examiner states that "[t]he specification does not enable one of ordinary skill in

Application No.: 10/659,149
Reply to Office Action of April 21, 2005

the art to make or use a composition of matter that is distinguishable from its naturally occurring state, in that it would require undue experimentation to do so." As explained above, the specification exemplifies and provides details as to processes which results in products that are claimed. The claimed invention is not inoperative, as evidenced by substantial data provided in the specification.

The Examiner discusses the so-called Wands factors in presenting the rejection. The first factor is the breadth of the claims. The Examiner reasons that since the claims are inoperative, the rejection under 35 USC 112, first paragraph is proper and this factor is satisfied. As discussed above, the claims present an operable invention and the specification provides substantial data in its support. Further, the data is commensurate in scope with the scope of the claims and, therefore, the claims are not unduly broad.

The second factor is the nature of the invention, wherein the Examiner states that "the scientific community has held the belief that matter cannot exist in energy states other than those known in nature." Support for the Examiner's assertion is respectfully requested. Manmade elements have been reported and accepted by the scientific community. Novel energy states for materials have been discovered over the years. Indeed, compare periodic tables published in 1980 (or earlier) with tables published more recently and one will note that it has changed substantially. Thus, it is not at all clear that the scientific community will reject the inventor's theories. Furthermore, even if members of the scientific community reject the inventor's theories, the invention is operable and enabled. The claims do not require acceptance of the underlying theory as they describe matter by a property that is supported by data and a specification which describes the process by which the products can be made.

In discussing the state of the art, the Examiner notes that "[t]here appears to be no prior art showing compositions characterized by a calibrated Uniquant analysis report wherein the report recites the presence of an element in the periodic table wherein the composition has not been in contact with said element..." To the best of the undersigned's knowledge, that is true. However, simply because the invention is novel does not mean that the invention is not enabled.

With respect to the factor relating to the person of skill in the art, the Examiner states that "even the most highly skilled physicists would agree that, according to conventional theory, there cannot exist compositions characterized by a calibrated Uniquant analysis report wherein the report recites the presence of an element in the periodic table wherein the composition has not

Application No.: 10/659,149
Reply to Office Action of April 21, 2005

been in contact with said element." It is agreed that the level of skill in this art is high. However, it is not agreed that the most highly skilled physicists would agree that the invention cannot exist. The Examiner has offered no proof of this allegation.

The fifth factor relates to the predictability in the art, which the Examiner asserts is satisfied in light of the alleged inoperability of the invention. Again, the specification has provided evidence of operability.

The Examiner states that the specification is "devoid of direction and guidance necessary to enable the skilled artisan to modify any or every of these properties," referring to factor 6. While it is unclear what properties the Examiner is referring to, substantial guidance in the form of exemplification has been provided. The examples provided herein establish that the process and its results are reproducible in obtaining a product that satisfies the claims. It is not clear what other kind of direction and guidance the Examiner and law demand.

The Examiner asserts that the specification does not provide a working example in discussing factor 7. Again, the specification sets forth fourteen examples. Tables 5-41 provide data which is relevant to the property recited in the claims. This is more than sufficient in establishing the operability of the invention and enablement as to how to make products falling within the scope of the claim.

In discussing the final factor (quantity of experimentation needed to make and use the invention), the Examiner first notes that a different version of the software may offer a different result. While it is agreed that a different version of the software would likely give different output, the fundamental question is would the report recite the presence of an element in the periodic table that has not been in contact with the material. It is believed that this result would occur regardless of the version of the software. This fact is no different than any property which requires measurement by an instrument. Newer versions of instruments generally strive to provide more accurate results as compared to older versions, for example. However, that does not mean that the property cannot be referred to in the claim or that undue experimentation would be required. The Examiner then states that "predictability or lack thereof" in the art refers to the ability of one skilled in the art to extrapolate the disclosed or known results to the claimed invention." The statement is not understood or how it relates to this factor. The experimentation provided in the specification is believed to be sufficiently reproducible to allow the person skilled in the art make products that fall within the claim.

Application No.: 10/659,149
Reply to Office Action of April 21, 2005

The Examiner goes on to state that "if the person skilled in the art cannot readily anticipate the effect of a change within the subject matter to which that claimed invention pertains, then there is a lack of predictability." While it is true that the technology described in this specification is new and that the effects of any and all changes in the process cannot be reliably predicted a priori, however, this is not required for enablement. There are many examples, particularly in pioneering inventions, where the initial patent application in a technology does not describe the detail that would be required to predict the results of all embodiments encompassed within its scope. Indeed, if this were a requirement for patentability, there would be no basis in the laws for patenting selection inventions and improvements as the patent application.

What is believed to be most relevant to the final Wands factor is the fact that the specification has provided fourteen examples. There is no reason to believe, based upon the exemplification provided in the specification, that undue experimentation would be required to successfully practice the invention.

Withdrawal of the rejection is requested.

Rejection under 35 U.S.C. 112, second paragraph

Claims 1-13 are rejected under 35 U.S.C. 112 second paragraph for using the word "Uniquant," a trademark, in the claim. The use of a trademark in a claim is not per se improper. MPEP 2173.05(u). In this case, the identification of the software by the source of that software was intended to provide clarity, not introduce ambiguity. In this case, since the software does not describe the material used in the claimed invention but a specific method of analyzing the product of the claim, it is believed to be definite. Indeed, the Examiner raises concern that different versions of the software may offer different results. Removal of the source of the software further aggravates that specific concern raised by the Examiner. Withdrawal of the rejection under 35 U.S.C. 112, second paragraph is requested.

Application No.: 10/659,149
Reply to Office Action of April 21, 2005

Conclusion

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned at (978) 251-3509.

Respectfully submitted,

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